

## Overview

Brazil has a large and diversified economy that offers US companies many opportunities to export their goods and services. As Brazil's largest single trading partner, the US enjoys a strong reputation in a variety of sectors. This report is one of a series that is published by the US Commercial Service's team of sector experts throughout the year. If you do not see an opportunity for your product here, please check out our other reports at [www.buyusa.gov/brazil](http://www.buyusa.gov/brazil) and consider contacting us directly to find out if we can help you export to Brazil.

## Summary

Phenomenal growth in Internet based services, along with the desire among the corporate market and consumers to cut telecommunications costs, will lead to vast expansion in the market for Voice over Internet Protocol (VoIP) services in Brazil in the upcoming years. This expansion, coupled in technology upgrades in the industry, in turn, will lead to a surge in demand for newer VoIP equipment that, at least for the short-term, can be supplied almost exclusively by US firms.

In Brazil the use of VoIP services is still concentrated in the corporate world. According to a recent study conducted by Yankee Group, one in every four Brazilian large corporations already uses the system. The growth of VoIP for the end-users, however, is highly dependent on the increase of broadband subscribers, which is still less than 5 % of the total population. By 2005 market experts predict that VoIP will become the second option for fixed and mobile telephones.

According to recent studies, the international incoming switched traffic reached approximately 240 million minutes by the end of 2004 in Brazil, while the outgoing VoIP traffic reached approximately 130 million minutes. This generated net revenues of approximately US\$ 20 million. This traffic is expected to increase 40 % in the next three years reaching net revenues of approximately US\$ 28 million.

As for IP telephony solutions, the Brazilian VoIP equipment market was valued at approximately US\$ 25 million by the end of 2004 and is projected to reach US\$ 58 million by 2006.

## Market Profile VoIP Services

Convergence in the Telecommunications industry is irreversible and the Internet Protocol is certainly its major driver. During the past four years, results have been low despite punctual marketing campaigns. However, the Brazilian



market has demonstrated a renewed interest in adopting IP technology solutions.

VoIP equipment and services will be in demand by not only the corporate end-users but also individual end-users. Many Brazilian companies turn to VoIP service to cut telecommunications costs and are actively introducing VoIP networks to connect their offices around the world. Most of the large companies such as GM, Ford and banks already use VoIP in their intranet services to cut costs of national and international connection. The market estimates that approximately 55% of these companies already use some kind of connection using VoIP.

The number of Internet users (20 million) and broadband Internet subscribers (2.1 million by the end of 2004) are on the rise, while local telephone line subscription fee is decreasing. Just as a comparison, the number of Internet subscribers was 12,000 in 2000 and Brazilians are ranked as some of the major users of Internet access. However, the price for individual end users is still considered very high for the majority of the population, and the 2.1 million broadband users represent less than 5 % of all lines in service. Broadband access is the key to VoIP growth and the low level of broadband penetration may represent a limiting factor in Brazil.

Four major incumbents dominate the industry, thus there is little competition. Telefonica SP, Telemar, Brasil Telecom and Embratel together control more than 95 % of the access lines. The "concession area" system in Brazil gave them a virtual monopoly in their respective regions and shielded them from genuine competitive pressures until recently.

The telecom carriers are aware that VoIP will drive the future and are investing large sums to upgrade their network however. They increased their investments in 2004 with the ADSL technology to slowly replace the old dial-up service. The incumbents largely control broadband access and intend to offer VoIP services in a more controlled manner, because VoIP can affect their business revenue streams by substituting the long-distance service, and by eliminating the local phone service. As a result, incumbents have little incentive to offer VoIP services.

On the other hand the Brazilian Regional Bell Operating Companies (RBOC) see VoIP as the great niche for them to effectively compete with the local incumbents. The last mile access historically prevented these companies from having access to the client to provide services in the long-distance market. Over the course of 2002 and 2003, the Brazilian authorities eliminated most of these regulatory constraints and the RBOCs' now see VoIP as their best option to finally be successful in the Brazilian market.

Most of these companies are already offering services to the corporate market but for the end-user consumer it will take a while until VoIP becomes reality.

Global Village Telecom (GVT) was the first RBOC to offer the set top box for individual end-users in its region. The president of GVT believes that it is too early to have an exact idea of the impact of VoIP services in the market but they intend to be the leader of the IP revolution in Brazil. GVT expects that by 2006 the company will have net revenue of US\$ 400 million and approximately 20 % of this amount will come from VoIP services. In 2004 the company invested a total of US\$ 17 million to upgrade their network.

Transit Telecom is another RBOC that invested US\$ 6.9 million to enter the market and is offering VoIP in residential condominiums in the wealthy region of Campinas, the 3<sup>rd</sup> largest city of the Sao Paulo state. They expect to have at least 1,500 subscribers by mid April and in the following months to offer IP telephony in the Sao Paulo State and other regions.

Unlike in the US, where the threat of cable telephones has pushed the RBOCs into IP telephony, in Brazil the market for cable players that intend to offer VoIP services only now is starting to move. Although cable TVs have only 16 % of the broadband market, these companies foresee good opportunities with VoIP services because they have the last mile to access clients, which have been the major problems for the RBOCs to expand their business.

U.S. companies interested in providing VoIP services could enjoy good perspectives in the Brazilian market by partnering with a local company that has already the license to provide this service in country. There is also the possibility of opening a company in Brazil but this is a more complicated process.

#### Major VoIP Service Providers in Brazil

Facility Based Telecom Service Providers	VoIP Service Providers
Telefonica	GVT
Telemar	Datora
Brasil Telecom	Transit Telecom
Embratel	IPPhone
Intelig	Nikotel
GVT	Redevox
Transit Telecom	Simphonia
CTBC Telecom	VoxFone

#### Foreign Companies with Presence in Brazil

AT&T – CallVantage

Net2Phone

V59

Skype

Vonage

According to market analysts SIP (Session Initiation Protocol) is the best option for an IP network because it provides the necessary protocol mechanisms to provide services such as call forwarding and personal mobility.

#### Market for VoIP Equipment

Despite its size and telecommunications development background, Brazilian market has somewhat lagged behind in the adoption of IP telephony until 2003. Two main reasons for this had to do with a strong “wait and see” attitude from companies, who were really expecting more from the cost benefit analysis. In 2004 the Brazilian market of VoIP equipment was valued at approximately US\$ 25 million and is

projected to reach US\$ 58 million by 2006. The market estimates that the IP solutions market will be pretty mature by 2007 and will highly impact the corporate segment.

Today the Brazilian corporate market purchases an average of 1.4 million of PBX extensions per year, 90% of which is analog. The remaining 10% are digital and from this less than 5% are IP. This market is expected to grow at approximately 24 % annual growth rate between 2004 and 2009.

The price of IP solutions has been one of the main restraints to the expansion of the voice equipment in the Brazilian market because most of the equipment is imported, US being the major supplier. Additionally the high taxes on imported equipment make IP PBX penetration quite challenging. In the best case scenario, a 40% charge is levied on the FOB price for an imported product. The philosophy behind these taxes is the protection of the local industry or to stimulate the opening of research and production centers from foreign companies. Lack of interoperability among the equipments, low quality of voice during point to point communication and the cultural barrier to put the voice network in a PC based platform are also barriers to overcome.

The IP telephony market has attracted players from the traditional voice segment such as Avaya, Alcatel, Nortel and Siemens, as well as data vendors such as Cisco and 3Com. These companies have developed IP-based solutions to assist their clients with their needs for reducing cost of operations management, maintenance and service while voice, data and supporting applications are transported over the same network. Cisco and Avaya are the US companies manufacturing PABX in Brazil. Siemens, Nortel, Alcatel and NEC are other international competitors producing locally. Local TDM vendors such as Intelbras (<http://www.intelbras.com.br/>) and Digtiro (<http://www.portaldigitro.com.br/>) will soon launch IP solutions, which will have some impact in the market for regional vendors, especially in the small and medium segment.

The Brazilian corporate market is paying close attention to the recent developments in the technology and are adopting hybrid PABX that have a IP gateway. The new paradigm of Next Generation Networks (NGN), which accelerates the convergence of wireless, wireline and Internet network, will guarantee the expansion of VoIP services and the underlying equipment market.

#### Best Prospects for VoIP Equipment

Voice is just one of the many services that could be provided over IP network, but the big challenge of IP telephony will be the quality of the service (QoS), mostly for the corporate market. US companies that offer products associated to the development of QoS, boxes that convert voice in data, contents such as conferencing, video calls & other multimedia applications, call center applications (not only for voice but for chats, etc) and other unique applications will enjoy good opportunities in the Brazilian market.

As for VoIP equipment, switch based gateways, server based gateways, router based gateways, and IP-PBX (private branch exchange), standalone gateways, media access gateways and

SS7 IP gateways are expected to grow and are also best prospects for US companies.

#### VoIP Services – Brazil's Broadband Market

(in 000s)	2003	2004	2005 est.	2006 Est.
<b>Broadband Subscribers</b>	1,212	2,144	3,580	5,201
• <b>DSL</b>	1,009	1,800	3,092	4,528
• <b>Cable</b>	203	344	488	673
<b>Lines in Service</b>	39,218	39,716	40,748	41,971
<b>DSL Penetration</b>	3%	5%	8%	11%
<b>Pay TV Subscribers</b>	3,548	3,653	3,930	4,229
<b>Modem Penetration</b>	6%	9%	12%	16%

Source: Morgan Stanley Research

#### Brazil IP Telephony Solutions Market

	2003	2004	2005 Est.	Est Annual Growth Rate
IP-Enabled Revenues Forecast	6.02	8.36	9.53	9.69%
IP-Enabled Lines Forecast	34,692	49,154	59,007	38.3%
IP-Centric Revenues Forecast	6.93	11.34	21.79	12.9%
IP-Centric Lines Forecast	23,100	38,581	78,039	42.6%
IP Terminals Revenues Forecast	4.94	5.70	10.26	43.9%
IP Terminals Units Forecast	15,816	24,436	43,282	54.4%

Source: Frost & Sullivan

### Competitive Analysis

To be competitive in the Brazilian market US companies should pay close attention to the following key competitive factors: cost of solution, converged solutions, ease integration with existing infrastructure and use, proven improved cost reduction, return of investments and workforce productivity; customer support; depth of application suite and functionality

U.S. VoIP equipment manufacturers hold a strong market position in Brazil, and account for 70 to 80% of the domestic gateway and gatekeeper markets, leading to reliance on U.S. software and affiliated equipment. Brazilian VoIP service providers and corporate end-users tend to prefer U.S. products because of superior quality and brand loyalty. As Brazilian VoIP service providers change their VoIP service technology standard from H323 to Session Initiated Protocol (SIP), U.S. companies are expected to strengthen their market position. Most of Brazilian VoIP equipment manufacturers are not ready to produce VoIP equipment for the SIP standard.

Foreign companies already offering gatekeepers (H.323) and SIP servers in Brazil are: 3Com, NEC, Nortel, Alcatel, Cisco, and Furukawa.

There are a few Brazilian companies such as Era, Mantel and PL Technologic offering these products. Most Brazilian VoIP equipment manufacturers still install foreign core parts into their products. Their products are on average only half of the price of U.S. products, but their quality has improved to almost the same level as that of U.S. products.

Imports from third countries are limited and may not increase market share because of poor quality.

The main foreign markets for Brazilian VoIP manufacturers are Japan, China and the U.S. Brazilian companies are trying to expand their export markets to Europe and Asian countries.

### End User Analysis

The end users of VoIP equipment and services are VoIP service providers as well as corporate and individual end-users of VoIP services. Small and medium companies looking for operational cost reduction alternatives as well as large enterprises with multiple branch offices. Main vertical markets include: service providers, financial services, government, education, travel and hospitality, call center outsourcers.

### Market Access

The Brazilian government is already allowing telephone numbers to be matched with VoIP service lines. To provide VoIP services in Brazil, the U.S. company has two options: 1) Open a company in Brazil and purchase a license provided by Anatel (Brazilian Telecommunications Agency); 2) Partner with a Brazilian company that has already the license to provide this service. There are several small players with license that would take great benefit of jointly pursuing business opportunities with complementary players.

Anatel wants to improve competition and reduce the market power of the current telecommunications carriers, therefore Anatel usually speeds up the process for new players to enter the market.

At present, all computer software/solutions products (both customized and packaged) as well as VoIP equipment enter Brazil at duty rate between 11 to 18%. However, the equipment is subject to type approval and EMC testing. Both type approval and EMC tests are conducted by the Organismos de Certificação Designados (OCD). OCDs are accredited laboratories that will perform tests required for the conformity assessment process for telecommunications to operate in this country. For additional information and a list of OCDs operating in country please refer to document "**Brazilian Accredited Laboratories for Telecom Equipment**" at <http://www.export.gov/marketresearch.html>

### Trade Promotions Opportunities

Participating in Brazilian IT trade shows is one of the best strategies for U.S. suppliers of VoIP equipment to promote and demonstrate the superiority of their products to Brazilian end-users and customers. The following are major exhibitions scheduled in Brazil.

#### Telexpo 2005 – Communications & Technology

Web: [www.telexpo.com.br](http://www.telexpo.com.br)

Dates of Exhibition: March 1-4, 2005

Place: Expo Center Norte - Sao Paulo – SP

Show Organizer: Advanstar Editora e Comunicações

Phone: 55/11 3170-7020 - Fax 55/11 3044-4919

Contact: Ligia Soares, Show Manager

[lsoares@advanstar.com.br](mailto:lsoares@advanstar.com.br)

#### VoIP Latin America 2005

Web: [www.ibcbrasil.com.br/voip](http://www.ibcbrasil.com.br/voip)

Dates of Exhibition: March 29 –31, 2005

Place: Crowne Plaza Hotel - São Paulo – Brazil

Show Organizer: IBC - International Business Communication

Phone: 55/11 3017-6800 Fax: 55/11 3017-6802

#### Telexpo VoIP 2005

Web: <http://www.telexpo.com.br/voip/>

Dates of Exhibition: August 24-25, 2005

Place: Mercure Grand Hotel Ibirapuera, São Paulo - SP

Show Organizer: Advanstar Editora e Comunicações

Phone: 55/11 3170-7020 - Fax 55/11 3044-4919

Contact: Ligia Soares, Show Manager

[lsoares@advanstar.com.br](mailto:lsoares@advanstar.com.br)

#### Futurecom 2005 - Telecom International Seminar & Business Trade Show

Web: [www.futurecom.com.br](http://www.futurecom.com.br)

Dates of Exhibition: October 24-27, 2005

Place: Centro Sul Conventions Center - Florianópolis – SC

Show Organizer: Provisuale

Phone: 55/41-314-3200 Fax: 55/41 314-3202

Contact: Laudalio Veiga, Show Manager

[laudalio@futurecom.com.br](mailto:laudalio@futurecom.com.br)

## Resources

- For more information about export opportunities in this sector contact US Commercial Service Industry Specialist Ebe Raso at:  
[ebe.raso@mail.doc.gov](mailto:ebe.raso@mail.doc.gov).
- For an overview of Best Prospects in the Telecoms, IT/Hardware, and Computer Software sectors in Brazil, please visit our Country Commercial Guide website:  
[www.focusbrazil.org.br/ccg](http://www.focusbrazil.org.br/ccg)
- For more reports on this sector in other countries, please visit Export.gov's site for US Commercial Service Market Research Worldwide:  
<http://www.export.gov/marketresearch.html>.
- Anatel – Brazilian Telecommunications Agency  
<http://www.anatel.gov.br/>.
- Brazil's Ministry of Communications:  
<http://www.mc.gov.br/>.

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This report was written by Ebe Raso, US Commercial Service Sao Paulo, Brazil.

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